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RESEARCH

Occupational risk involving students of health

Risco ocupacional envolvendo estudantes da área da saúde

Riesgos laborales de la participación de estudiantes de la salud

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ABSTRACT

Objective: To analyze the social representations of occupational risks involving students in the area of health. **Method:** Exploratory research with 160 students from nursing, medicine and dentistry, through interviews. The data were processed in ALCESTE 4.8 and lexical analysis done by descending hierarchical classification. **Results:** In four semantic classes, namely: occupational risks involving students in the area of health, the work environment and occupational risks, exposure to accidents with sharps and adoption of standard precautions as biosecurity measures. **Conclusion:** Students healthcare represent occupational risks, such as a concern for the prevention of cross infection in the workplace, should both professionals and students of health, adopt standard precautions and biosecurity measures in the environment work. **Descriptors:** Occupational risk, Social psychology, Prevention.

RESUMO

Objetivo: Analisar as representações sociais dos riscos ocupacionais que envolvem estudantes da área da saúde. **Método:** Pesquisa exploratória com 160 estudantes de enfermagem, medicina e odontologia, por meio de entrevista. Os dados foram processados no ALCESTE 4.8 e passaram por uma análise lexical através da classificação hierárquica descendente. **Resultados:** Apresentados em quatro classes semânticas, a saber: os riscos ocupacionais que envolvem estudantes da área da saúde; o ambiente de trabalho e os riscos ocupacionais; exposição aos acidentes com materiais perfurocortantes e adoção das precauções padrão como medidas de biossegurança. **Conclusão:** Os estudantes da área da saúde representam os riscos ocupacionais, como uma preocupação para a prevenção de infecções cruzadas no ambiente de trabalho, devendo tanto os profissionais quanto os estudantes da área da saúde, adotarem as precauções padrão e as medidas de biossegurança no ambiente de trabalho. **Descritores:** Risco ocupacional, Psicologia social, Prevenção.

RESUMEN

Objetivo: Analizar las representaciones sociales de los riesgos laborales que involucran a los estudiantes en el área de la salud. **Método:** Investigación exploratoria con 160 estudiantes de enfermería, medicina y odontología, a través de entrevistas. Los datos fueron procesados en ALCESTE 4,8 y el análisis realizado por clasificación jerárquica descendente. **Resultados:** Fueran presentados en cuatro clases semánticas, a saber: los riesgos profesionales relacionados con los estudiantes en la salud, el ambiente de trabajo y los riesgos laborales, la exposición a accidentes con objetos punzantes y la adopción de las precauciones estándar como medidas de bioseguridad. **Conclusión:** Estudiantes de la salud representan riesgos laborales, tales como la preocupación por la prevención de la infección cruzada en el lugar de trabajo, en caso de los profesionales y estudiantes de la salud, la adopción de las precauciones estándar y las medidas de bioseguridad en el medio ambiente laboral. **Descriptores:** Riesgos laborales, Psicología Social, Prevención.

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INTRODUCTION

Occupational risks originate in unhealthy and dangerous activities, whose work nature, conditions or methods are divided into five major groups, according to the Pan American Health Organization in Brazil. There is physical, such as aggression or adverse conditions of environmental nature that may compromise the health of the worker. In addition, chemicals, such as agents and chemical substances, under the form of a liquid, gaseous or particulate and dust mineral and vegetable, common in work processes. In addition, biological microorganisms usually associated with the work in hospitals, laboratories and in agriculture and animal husbandry. The next one is ergonomic and psychosocial - that stem from work organization and management. The control mechanisms over the biological, chemical, physical and mechanical agents of the hospital environment can cause adverse health effects in professionals.[1]

Exposure to biological hazards is a concern, as are causing many health problems of workers, therefore, to perform activities that involve the direct and indirect care to patients, are often exposed to infections transmitted by microorganisms present in the blood or other body fluids. Among the accidents likely to occur within the hospital environment, the ones that involve piercing, in particular the needles, has been recognized as one of the main problems of exposure for workers in acquisition of infection, exposing them also to mechanical risks.[2]

Percutaneous exposures are the most responsible for occupational transmission of blood infections for health professionals. It is important to emphasize that the post-exposure prophylaxis are not fully effective. Thus, the prevention of exposure to blood or other biological materials is the primary and most effective measure to prevent transmission of HIV and virus of hepatitis B and C.[3]

In Brazil, work-related injuries must be reported immediately after its occurrence, by means of the issuance of the Work Accident Communication (WAC), which should be forwarded to the injured, to the hospital, to the labor union of the corresponding category, the Unified Health System (SUS), Social Pension and the Ministry of Labor.[4]

There is no legislation dealing specifically with the safety and health at work in the healthcare sector; in this scenario, the Regulatory Standard 32 (NR-32) is of great importance, such as federal legislation, specific safety and health at work in the healthcare sector. [5]

Faced with this problem, the study is justified by the work environment of health professionals involved risks during the performance of their duties. In Dentistry, Nursing and Medicine there are physical, chemical and biological risks, both for professionals and patients, acquired through work-related accidents; the professionals are more likely to acquire diseases contracted directly or indirectly in these are areas.

In the work environment of medicine, nursing and dentistry students there are risks, by putting them in direct contact with the saliva, blood and secretions of patients, which has viruses, bacteria and fungi, thus contributing to increase the chance of cross-infection.

This study aims to analyze the Social Representations of occupational risks that involve students in the health area. Social representations are defined as a form of common sense knowledge, being related to the way people understand and grasp the information in accordance with the references that have, having the function of development of behaviors and communication between individuals.

Social Representations - SR are a system of knowledge produced and socially shared, guiding behaviors and intervene in the definition of the individual identity, social and in the construction of objects. It is from the SR, the individual suffers the same pressure of the dominant society, and thus, this kind of thinking and expressing their feelings.[6]

The Break with the prevailing biomedical paradigm, presents itself as a modern way of thinking about health, considering the influence of social contexts on behavior.[7]

There is the need for adoption of new benchmarks and new methodologies that overcome the positivist traditions, because these fragment reality in variables, drawing dimensions restricted and isolated from psychosocial and cultural relations more extensive. There are contribution possibilities of the SRT, supporting a process of evaluation of health care programs, because this is a theory that has by reference the individual situated in a social context in which historical experiences and daily practices allow you to ownership and the reconstruction of the meanings attributed to objects.[8-9]

Given this issue, this study aims to analyze the Social Representations of occupational risks that involve students in the health area.

METHOD

This is a descriptive and exploratory research, held in a private Higher Education Institution. The study subjects were 160 students of medicine, nursing and dentistry. The criteria for inclusion of subjects were to be in the 5th to the last period of the course, in which the students are already in clinical care and/or health services and accept participate in the research.

The study does not provide the possibility of risks or difficulties, since the proposed methodology does not present risks to research subjects

During the fieldwork, the interview technique was used as a research tool, it is considered important in the fieldwork, facilitating the understanding of the social reality. The data were collected in the period from July to October 2011. The amount of research subjects was defined by saturation, which occurs when there is repetition of the statements of research subjects.[10]

Upon verbal acceptance of the study subjects were asked to sign the same as the term of free and informed consent, which meets the ethical and legal issues as the Ethics and Research - CEP / NOVAFAPI agreed with the requirements of Resolution 196 / 96, which deals with the guidelines and standards for research involving humans beings.[11]

The data generated were processed by Alceste 4.8 software, created by Reinert, in France, in the late 70's and permits performing automatically analysis of interviews, open questions of socioeconomic investigations, collection of various texts and aims at quantifying a text to extract the meaning of a stronger structure.

The ALCESTE software (Analyze des Lexemes Cooccurrents dans les Enonces d a Texte) was used in version 4.8. enables the lexical analysis by means of descending hierarchical classification (DHC), which uses the co-occurrence of words in the statements that constitute the discursive material. The software organizes the information considered most relevant, and which has as a reference in its methodological basis the conceptual logical approach and of lexical worlds[12].

In this study, the treatment and analysis of data, through the Descending Hierarchical

Classification, allowed the deductions on the occupational risk for students in the area of health care.

This work was carried out through approval by the Research Ethics Committee of the University Center UNINOVAFAPI, Certificate of Presentation in Appreciation for Ethics (CAAE) 0139.0.043.000 -11.

RESULTS AND DISCUSSION

Four semantic classes were identified in the material analyzed and the association of these variables of the study, gender, age, period and course, which represented 100% of material submitted to analysis.

The corpus is analyzed in the study of compound 155 (ICU) or interviews and was divided into 251 elementary context units (ECU).

The descending hierarchical analysis resulted in a distribution of classes or thematic contexts, through the dendogram shown below (figure 1).

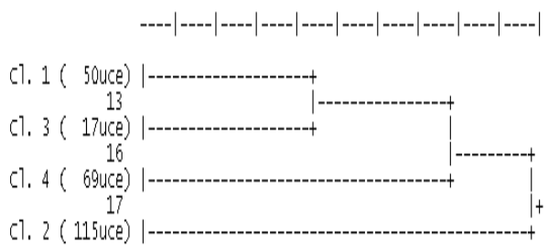

Figure 1. Dendogram with distribution of ECUs in semantic classes. Source: ALCESTE Software 4.8

The dendogram generated represents 85% of the units of elementary context (EUA) clipped from text, i.e. 295 ECUs identified were classified 251. Thus, it was possible to form a graph with the ECUS classified, showing, in percentage, the amount of words cited by class (Figure 2).

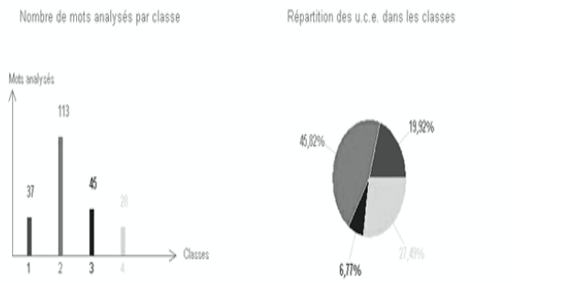

Figure 2. The graph in columns shows the grouping of ECUs in semantic classes. The pie chart shows the percentage of ECUs per class.

The semantic classes were named according to the most frequently cited topics:

Class 1 - occupational risks that involve students in the area of health care - has highlighted the theoretical knowledge of students about the occupational hazards: biological, related to contact with body fluids, such as blood; chemical, through contact with gases, vapors and harmful substances; physical, such as noise, vibration, radiation, cold heat and abnormal pressures; ergonomic, associated with the postures prolonged inadequate, repetitiveness and intense physical exertion and psychosocial, associated with the tasks with a high degree of demands and responsibilities, that generate tension for the professionals, developing situations of stress and depression.

Class 3 - Exposure of health workers to occupational risks - the working accidents related to biological fluids are the most recognized by students. They are most often cited accidents with piercing, in particular the needles and scalpels, due to the risk of contamination by blood by virus of hepatitis B and C and HIV.

Class 4 - Exposure to sharps - this class, students in the health field have expressed the importance of biosecurity measures to avoid accidents with sharp materials.

Class 2 - adopted by professionals to prevent cross-infection in the workplace biosecurity measures - in health care, like any other the workplace can

lead to increased risks and hazards during the performance of their duties. The main measures of biosecurity recognized were the use of personal protective equipment (PPE), such as masks, gloves, among others.

The biosecurity of health professionals, in their work environment, is by means of a set of actions to prevent, reduce or eliminate risks inherent in the activities of research, production, education, technological development and provision of services that may compromise the health of human beings, animals, the environment or the quality of the work performed.[14]

The occupational accident is a direct, sudden and unintended interaction between the person and the offending agent in a short time interval. This type of accident is linked to elements present in the work environment that can cause damage to the body of the worker, causing occupational diseases acquired in the long term. Health professionals are also inserted in this context.[15]

Health care workers are exposed to occupational hazards such as: physical, biological, chemical and ergonomic. Physical risks refer to risks produced by heat, cold, noise, vibration, ionizing and non-ionizing radiation, extreme temperatures, ultrasound, abnormal pressures and cutting and sharp materials. As a prevention, one should conduct proper technique, proper knowledge and primary barriers.[14,16]

Regarding the chemical risks, the main substances involved are the combustible solvents, explosives, irritant, volatile, caustic, corrosive and toxic. These can be absorbed by the human body by inhalation, ingestion or skin contact. The prevention of accidents must then be taken through conducting proper technique, proper knowledge and primary barriers.

The risks are related to ergonomic postural orientation of the worker. This is due to shift work, monotonous, repetitive and the adoption of inappropriate postures. This affects the quality of the work performed.[17]

The biological risks are those that are most relevant to Medicine, since the majority of their professional lives in direct contact with their patients, sick or not. The biological materials are fluids and tissues of man himself, such as blood, urine, sputum, surgical pieces, secretions, etc. , or samples from other living beings, such as yeasts, fungi, plants, animals, parasites.

The primary barrier is of great importance, since this and used in the correct way, it prevents the majority of work-related accidents, mainly the biological ones. It is using personal protective equipment (PPE), which are designed to protect the physical integrity and health of workers, classified according to the part that is protecting head, body, upper and lower limbs. PPE most commonly used are masks, gloves, protectors for eyes, nose and mouth and aprons.[18]

With the epidemic of HIV / AIDS in the '80s, were implanted post-expositional behaviors and preventive measures or standard precautions. Thus, careful handling of sharps is recommended, avoiding the recapping of needles and disconnection of the syringe before disposal, in addition to the destined appropriate sharp material recipients after their use. The use of PPEs is also recommended. As prevention measures for specific infections through blood or other bodily fluids, only the vaccine against hepatitis B is available, with 90 to 95% of effectiveness.[19]

It is recommended as first conduit, after exposure to biological material, immediate care with the affected area, and washing it with area soap and water in cases of skin or percutaneous exposures, with the use of de-germing antiseptic

solutions is an option. There is no study that justifies carrying out the above expression site as a way to facilitate spontaneous bleeding. In the exhibitions of the mucous membranes, it must be washed thoroughly with water or physiological saline solution.[3]

The washing of hands by health professionals is also a very important exercise, considerably reducing the rates of nosocomial infections. The use of soap and water, combined with friction, removes microorganisms, oils, sweat and dead cells. The washing of hands should be performed before and after the use of gloves, always that your hands are dirty, before and after the administration of medication by the various ways, preparation of materials and equipment, various procedures performed in a same patient, preparation of respiratory therapy, sanitization of patient and withdrawal and manipulation of catheters. The use of soaps and anti-septics is also important, to remove dirt and exert bactericidal effect, respectively.[14]

With respect to psychosocial occupational risk, few studies have focused on the prevalence of work-related stress. Recent evaluations indicate that demands and job control are associated with worsening of workers' mental health. The increased workload with high physical and psychological demands has been linked to symptoms of disease, as well as sick leave.[20]

Many times the professional is obliged to change their biorhythms to adapt to their new routine labor. This can cause changes in their quality of life, to the extent that breaks the biological cycles. Thus, it becomes important also evaluate the emotional aspect and psychosocial context, because it can also compromise the health of the individual and interfere with the quality of their work, leading to accidents.

The existence of reliable biological safety standards and applicable is of great importance as a prerequisite for private investments in biotechnology, guaranteed by appropriate conditions for the protection of intellectual property. Thus, they improve it if both the individual protection of the health professional and, consequently, the quality of his work. [14]

CONCLUSION

Healthcare students represent occupational hazards, such as a concern for the prevention of cross infection in the workplace, should both professionals and students of the health area, adopt standard precautions and biosecurity measures in the workplace. These measures can prevent occupational risks, especially the biological by contact with blood and its derivatives and by exposure to accidents with piercing materials that are treated as a medical emergency, and the professional or student splintered be promptly evaluated by a specialist, and, if indicated, start the chemotherapy regimen prophylactic drugs to prevent a major complication.

Given the above, it is evident that the knowledge produced and socially shared by students, linking them to the social constructs resulting from their expressed cultures in the opinions, attitudes and personal stories of this social group, thus allowing the SR to contribute in training and orientation of behaviors. These representations could be learned on the principal measures taken to prevent occupational risk, knowledge and appreciation of risks in professional practice, among other constituents, which are part of personal and technical criteria related to to care in this context.

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